



Omyafood® 120

High-performance non-nano
anti-caking agent



THINKING OF TOMORROW

Ready for safe anti-caking?

Revitalize your formula with Omyafood 120

Increasing demand for new and innovative ingredients is driving food producers to seek out safe, yet high-performance, alternatives. Omyafood 120 offers both while also enabling the safe and easy processing of powdered products.

Powdered products span the entire spectrum of the food and beverage industry - from raw materials to end products. The market is expected to grow at a compound annual growth rate (CAGR) of 6.5% until 2026. However, processing, quality and durability are challenging due to the flow properties of powder applications.

With Omyafood 120 Omya has developed a highly efficient anti-caking agent which features safe and easy powder handling, and processing.

Innovative all-round solution

Omyafood 120 is based on functionalized calcium carbonate (FCC) which means that particles have undergone a patented recrystallization process to create a new mineral composition. The unique structure of the advanced non-nano mineral offers high porosity, strong moisture-binding capacity and reduced mechanical interlocking. As such, it provides a safe and efficient alternative to traditional flow aids. Omyafood 120 supports better processability of food powders during manufacturing, superior storage and enhanced preservation of the product quality throughout the whole supply chain. All of this ensures optimal product performance. Furthermore, as Omyafood 120 is a low dusting material it contributes to a safer production environment.



High efficiency

Powders are often highly cohesive and difficult to handle when discharged from silos, drums or bags, and also during conveying, feeding, mixing and dosing. Caking describes the agglomeration of powders that form during transportation or storage due to changes in temperature or moisture. During processing, caked powders become more challenging, resulting in a loss of product quality and higher energy demand.

Porous Omyafood 120 particles efficiently counteract this effect thanks to their strong absorption and moisture-binding capabilities. Adding Omyafood 120 to powder

reduces their adhesive forces, thereby preventing lumps. It allows for better storage and preservation of product quality throughout the supply chain, resulting in a higher end product performance. The size and grade of Omyafood 120 perfectly supports food powders and intermediates such as milk powder, milk protein for protein drinks, spice blends for seasoning, energy drinks, coffee creamers, salt, starch, sports powders and vitamin premixes. Consisting mainly of brilliant white minerals, the ingredient also acts as a colour-enhancing white pigment as well as a natural calcium source to optimise nutritional values. Omyafood 120 is vegan, halal and kosher.



Omyafood 120 is recommended for the following applications:

| Food Powder | Omyafood 120 |
|-----------------------|--------------|
| Milk powder (Dairy) | ✓✓ |
| Milk protein drinks | ✓✓ |
| Coffee creamers | ✓✓ |
| Spice mix (Seasoning) | ✓✓ |
| Sport drinks | ✓ |
| Salt | ✓ |
| Energy drinks | ✓ |



✓✓ = Main applications ✓ = Possible usage

Effective and future-proof

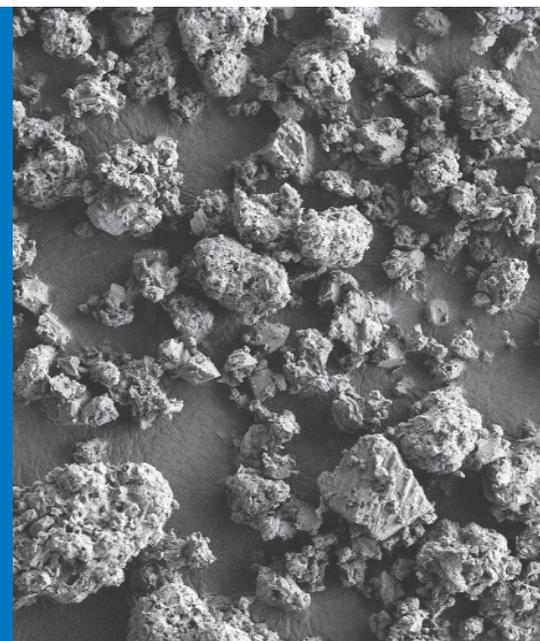
Omya places a strong emphasis on natural and sustainable innovations that go above and beyond the benchmark when it comes to efficiency. In a test series using a Powder Rheometer, Omyafood 120 was compared with market references and proved to be as good as, if not better than, conventional flow aids. Factors assessed were caking strength, measured by the amount of energy required to de-cake powders or the crust depth (see figure 1 & 2), as well as followability, measured by basic flow energy, specific energy and compressibility. Materials tested were milk powder, a spice blend and pea starch.

Typical product data

| Product | Bulk Density (g/ml) | d50%(µm) | d98%(µm) |
|--------------|---------------------|----------|----------|
| Omyafood 120 | 0.20 | 6 | 20 |

Benefits

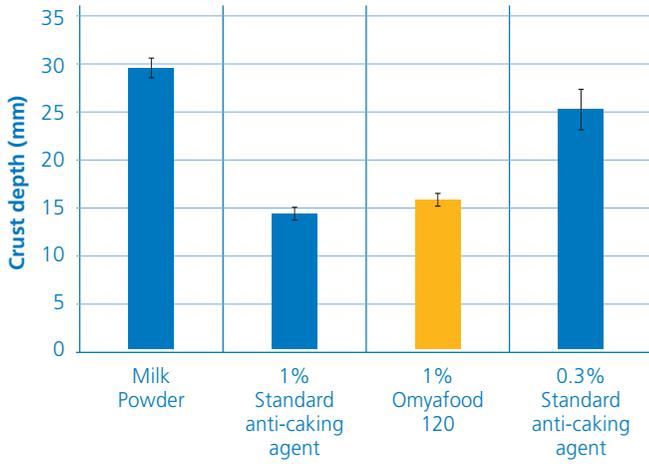
- Effective anti-caking
- Easier powder processability
- Improved product stability in challenging storage conditions
- Improved end product performance
- Safer working conditions during production (less dust formation)
- No production alteration or further investments needed



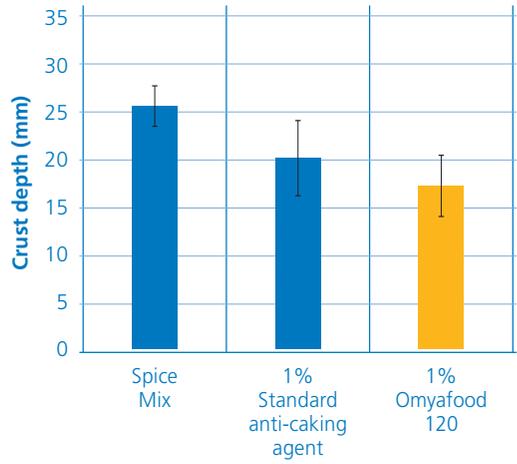
Caking strength

Caking strength measured by amount of energy to de-cake powders or the crust depth.

Milk powders



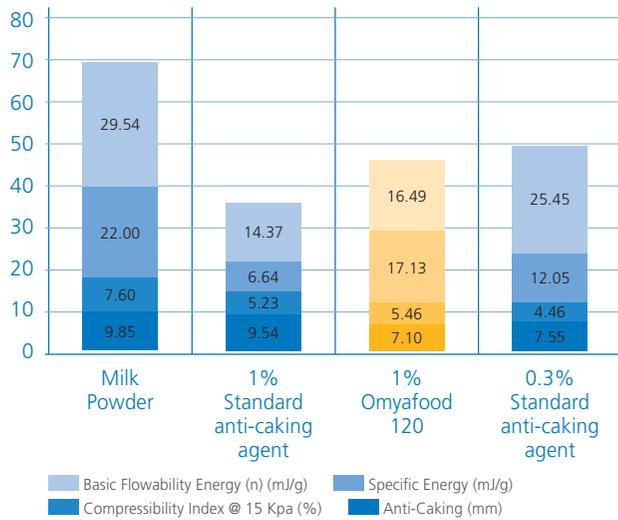
Spice mixes



Flowability

Flowability measured by basic flow energy, specific energy and compressibility.

Milk powder

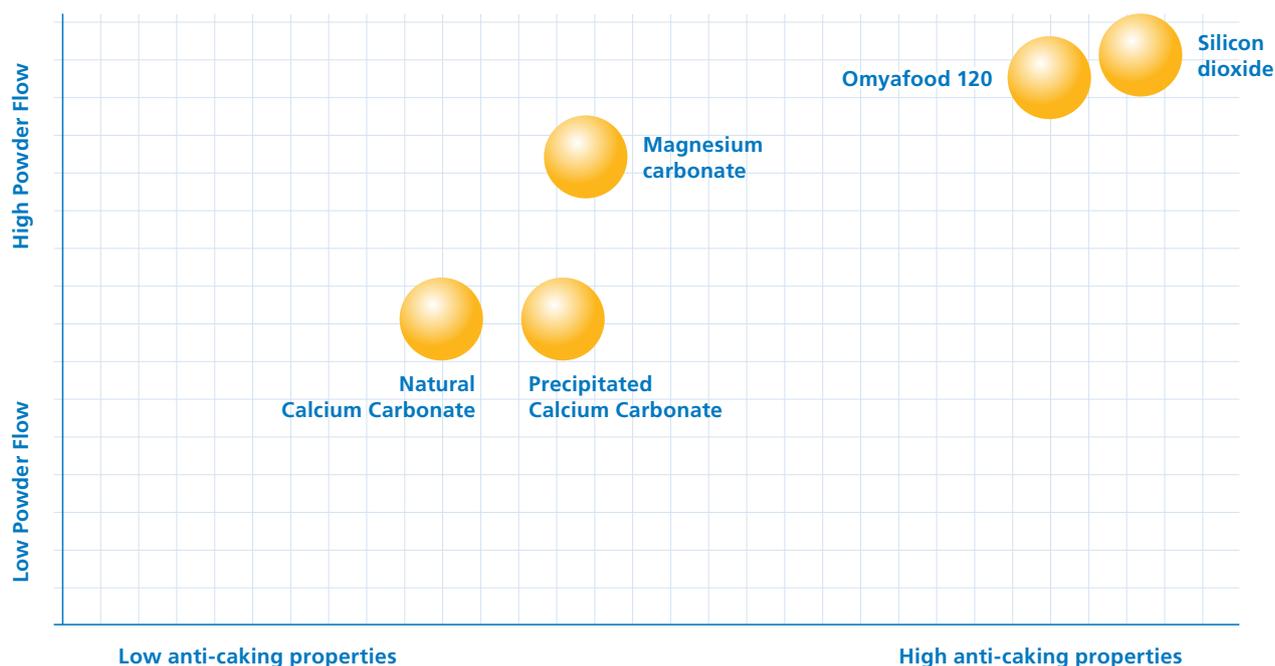


Spice mixes



Overall Performance

Omyafood 120 vs alternative standard anti-caking options.



For efficient processing, mixing and precise dosing, a powder needs to flow freely at all times to avoid caking and ensure the quality of the end product.

Omyafood is a registered trademark of Omya AG in the European Union, USA and Switzerland.

* Omyafood 120 is not an engineered nanomaterial as defined in ISO/TS 80004-2:2015 and does not need nano labelling according to Regulation (EU) 2015/2283 and Regulation (EC) No 1169/2011. It does not fall under Articles L. 523-1 to L. 523-5 of the French Environmental Code, therefore needs no registration in the French Nano Register.

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